

O'Bryen, Barbara

From: Goldberg, Jeanine
Sent: Tuesday, April 02, 2002 7:34 AM
To: O'Bryen, Barbara
Subject: 09/762,724- MSG Pneumocystis carinii

Please place results on DISK.

1. Please search SEQ ID NO: 17-20, 23, 24
2. Please search SEQ ID NO: 13, positions 2821-3072
3. Please search SEQ ID NO: 3, positions 2758-3006
4. Please search SEQ ID NO: 1, positions 2894-3042
5. Please search SEQ ID NO: 5, positions 2845-3090

THANK YOU
Jeanine

Jeanine Enewold Goldberg
1634
CM1--12D11
Mailbox-- 12E12
306-5817

Point of Contact:
Barb O'Bryen
Technical Information Specialist
STIC CM1 6A05 308-4291

BoB
4-2-02

SEQ ID NO: 13, nucleotides 2821-3072

RESULT 5

PMCMMSGI

LOCUS PMCMMSGI 3363 bp DNA PLN 26-SEP-1994

DEFINITION Pneumocystis carinii B-cell receptor (msgI) gene, 3' end.

ACCESSION L27092

VERSION L27092.1 GI:535706

KEYWORDS B-cell receptor.

SOURCE Pneumocystis carinii DNA.

ORGANISM Pneumocystis carinii

Eukaryota; Fungi; Ascomycota; Pneumocystidomycetes;

Pneumocystidaceae; Pneumocystis.

REFERENCE 1 (bases 1 to 3363)

AUTHORS Garbe, T.R. and Stringer, J.R.

TITLE Molecular characterization of clustered variants of genes encoding major surface antigens of human Pneumocystis carinii

JOURNAL Infect. Immun. 62 (8), 3092-3101 (1994)

MEDLINE 94314421

FEATURES Location/Qualifiers

source

1. .3363

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/db_xref="taxon:4754"

mat_peptide

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/gene="msgI"

/standard_name="major surface antigen"

/evidence=experimental

/product="B-cell receptor"

gene

152. .3244

/gene="msgI"

CDS

<152. .3244

/gene="msgI"

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/product="B-cell receptor"

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BASE COUNT 1312 a 505 c 753 g 793 t

ORIGIN

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Best Local Similarity 90.9%; Pred. No. 2.8e-47;
Matches 229; Conservative 0; Mismatches 17; Indels 6; Gaps 1;

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Db 3233 TTCATGATTTAG 3244
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SEQ ID NO: 3, nucleotides 2758-3006

RESULT 7

PMCMGSI

LOCUS PMCMGSI 3363 bp DNA PLN 26-SEP-1994

DEFINITION Pneumocystis carinii B-cell receptor (msgI) gene, 3' end.

ACCESSION L27092

VERSION L27092.1 GI:535706

KEYWORDS B-cell receptor.

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ORGANISM Pneumocystis carinii

Eukaryota; Fungi; Ascomycota; Pneumocystidomycetes;

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TITLE Molecular characterization of clustered variants of genes encoding

major surface antigens of human Pneumocystis carinii

JOURNAL Infect. Immun. 62 (8), 3092-3101 (1994)

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source

1. .3363

/organism="Pneumocystis carinii"

/db_xref="taxon:4754"

mat_peptide

152. .3241

/gene="msgI"

/standard_name="major surface antigen"

/evidence=experimental

/product="B-cell receptor"

gene

152. .3244

/gene="msgI"

CDS

<152. .3244

/gene="msgI"

/codon_start=1

/product="B-cell receptor"

/protein_id="AAA21645.1"

/db_xref="GI:535707"

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BASE COUNT 1312 a 505 c 753 g 793 t

ORIGIN

Query Match 61.6%; Score 153.4; DB 8; Length 3363;
Best Local Similarity 79.1%; Pred. No. 1.2e-33;
Matches 197; Conservative 0; Mismatches 46; Indels 6; Gaps 1;

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Qy      61 acatccacaaccacatctacagtcacgtcaagaataacgttgacctcgacaagacggtgt 120
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Db 3059 ACATCTACCATCACATCTACGATTACATCAAAAATAACATTGACATCAACAAGGCGGTGC 3118

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Db 3119 AAACCAACCAAGTGTACGACAGG-----GGATGATGCAGAAGACGTGAAGCCAAGTGAA 3172

Qy     181 gggttgaggatgagtggtgagtgatgaggggggtgttattagcaatgacgatttca 240
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Db 3173 GGCTTGAGGGTGAGCGGGTGAATGTGATGAGGGGGGCAATAGTAGCAATGGTTATTTTCG 3232

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Db 3233 TTCATGATT 3241
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SEQ ID NO: 1, nucleotides 2894-3042

RESULT 7

PMCMGSI

LOCUS PMCMGSI 3363 bp DNA PLN 26-SEP-1994

DEFINITION Pneumocystis carinii B-cell receptor (msgI) gene, 3' end.

ACCESSION L27092

VERSION L27092.1 GI:535706

KEYWORDS B-cell receptor.

SOURCE Pneumocystis carinii DNA.

ORGANISM Pneumocystis carinii

Eukaryota; Fungi; Ascomycota; Pneumocystidomycetes;
Pneumocystidaceae; Pneumocystis.

REFERENCE 1 (bases 1 to 3363)

AUTHORS Garbe,T.R. and Stringer,J.R.

TITLE Molecular characterization of clustered variants of genes encoding
major surface antigens of human Pneumocystis carinii

JOURNAL Infect. Immun. 62 (8), 3092-3101 (1994)

MEDLINE 94314421

FEATURES Location/Qualifiers

source

1. .3363

/organism="Pneumocystis carinii"

/db_xref="taxon:4754"

mat_peptide

152. .3241

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/standard_name="major surface antigen"

/evidence=experimental

/product="B-cell receptor"

gene

152. .3244

/gene="msgI"

CDS

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/gene="msgI"

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/product="B-cell receptor"

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/db_xref="GI:535707"

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BASE COUNT 1312 a 505 c 753 g 793 t

ORIGIN

SEQ ID NO: 5, 2845-3090 nucleotides

RESULT 1

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LOCUS AF033208 3089 bp DNA PLN 10-SEP-1998

DEFINITION Pneumocystis carinii f. sp. hominis clone HUMSG11 major surface glycoprotein (MSG) gene, partial cds.

ACCESSION AF033208

VERSION AF033208.1 GI:3560512

KEYWORDS .

SOURCE Pneumocystis carinii f. sp. hominis.

ORGANISM Pneumocystis carinii f. sp. hominis
Eukaryota; Fungi; Ascomycota; Pneumocystidomycetes;
Pneumocystidaceae; Pneumocystis.

REFERENCE 1 (bases 1 to 3089)

AUTHORS Garbe,T.R. and Stringer,J.R.

TITLE Molecular characterization of clustered variants of genes encoding major surface antigens of human Pneumocystis carinii

JOURNAL Infect. Immun. 62 (8), 3092-3101 (1994)

MEDLINE 94314421

REFERENCE 2 (bases 1 to 3089)

AUTHORS Mei,Q., Turner,R.E., Sorial,V., Klivington,D., Angus,C.W. and Kovacs,J.A.

TITLE Characterization of major surface glycoprotein genes of human Pneumocystis carinii and high-level expression of a conserved region

JOURNAL Infect. Immun. 66 (9), 4268-4273 (1998)

MEDLINE 98380374

REFERENCE 3 (bases 1 to 3089)

AUTHORS Mei,Q., Turner,R., Sorial,V., Klivington,D., Angus,C.W. and Kovacs,J.A.

TITLE Direct Submission

JOURNAL Submitted (07-NOV-1997) Critical Care Medicine Dept., National Institutes of Health, 10 Center Drive, MSC 1662, Bethesda, MD 20892-1662, USA

FEATURES Location/Qualifiers

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 Qy 241 atttag 246
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SEQ ID NO: 5, nucleotides 2845-3090

RESULT 6

PMCMGSI

LOCUS PMCMGSI 3363 bp DNA PLN 26-SEP-1994

DEFINITION Pneumocystis carinii B-cell receptor (msgI) gene, 3' end.

ACCESSION L27092

VERSION L27092.1 GI:535706

KEYWORDS B-cell receptor.

SOURCE Pneumocystis carinii DNA.

ORGANISM Pneumocystis carinii

Eukaryota; Fungi; Ascomycota; Pneumocystidomycetes;
Pneumocystidaceae; Pneumocystis.

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source 1. .3363
/organism="Pneumocystis carinii"
/db_xref="taxon:4754"
mat_peptide 152. .3241
/gene="msgI"
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/evidence=experimental
/product="B-cell receptor"

gene 152. .3244
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BASE COUNT 1312 a 505 c 753 g 793 t

ORIGIN

Query Match 87.6%; Score 215.6; DB 8; Length 3363;
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Matches 227; Conservative 0; Mismatches 19; Indels 0; Gaps 0;

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LOCUS PCU39660 629 bp mRNA PL 29-NOV-1995
DEFINITION **Pneumocystis carinii** major surface glycoprotein (msg) mRNA, partial
cds.
ACCESSION U39660
NID g1079706
KEYWORDS .
SOURCE **Pneumocystis carinii**.
ORGANISM **Pneumocystis carinii**
Eukaryotae; mitochondrial eukaryotes; Fungi; Ascomycota;
Archaeascomycetes; Pneumocystidaceae; Pneumocystis.
REFERENCE 1 (bases 1 to 629)
AUTHORS Kovacs, J.A., Edman, J.C. and Angus, C.W.
TITLE Direct Submission
JOURNAL Submitted (30-OCT-1995) J.A. Kovacs, CCMD, NIH, Building 10, Rm
7D43, MSC 1662, Bethesda, MD 20892-1662, USA
FEATURES
source Location/Qualifiers
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LOCUS AF043102 4002 bp mRNA PLN 06-JUN-1998
DEFINITION *Pneumocystis carinii* surface glycoprotein A (gpA) mRNA, complete cds.
ACCESSION AF043102
NID g3184385
KEYWORDS
SOURCE *Pneumocystis carinii*.
ORGANISM *Pneumocystis carinii*
Eukaryota; Fungi; Ascomycota; Archiascomycetes; Pneumocystidaceae; *Pneumocystis*.
REFERENCE 1 (bases 1 to 4002)
AUTHORS Haidaris, C.G., Medzihradsky, O.F., Gigliotti, F. and Simpson-Haidaris, P.J.
TITLE Molecular characterization of mouse *Pneumocystis carinii* surface glycoprotein A
JOURNAL DNA Res. 5, 77-85 (1998)
REFERENCE 2 (bases 1 to 4002)
AUTHORS Haidaris, C.G., Medzihradsky, O.F., Gigliotti, F. and Simpson-Haidaris, P.J.
TITLE Direct Submission
JOURNAL Submitted (14-JAN-1998) Microbiol/Immunol, U. Rochester Med. Ctr., Box 672, 601 Elmwood Ave., Rochester, NY 14642, USA
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LOCUS D31920 81 bp mRNA PL 22-SEP-1997
DEFINITION **Pneumocystis carinii** MSG mRNA for major surface glycoprotein,
5'UTR.
ACCESSION D31920
NID g2443384
KEYWORDS MSG.
SOURCE ~~Pneumocystis~~ **Pneumocystis carinii** cDNA to mRNA.
ORGANISM **Pneumocystis carinii**
Eukaryotae; Fungi; Ascomycota; Archaeascomycetes;
Pneumocystidaceae; Pneumocystis.
REFERENCE 1 (sites)
AUTHORS Wada,M., Sunkin,S.M., Stringer,J.R. and Nakamura,Y.
TITLE Antigenic variation by positional control of major surface
glycoprotein gene expression in *Pneumocystis carinii*
J. Infect. Dis. 171 (6), 1563-1568 (1995)
MEDLINE 95287050
REFERENCE 2 (bases 1 to 81)
AUTHORS Nakamura,Y.
TITLE Direct Submission
JOURNAL Submitted (24-JUN-1994) to the DDBJ/EMBL/GenBank databases.
Yoshikazu Nakamura, Institute of Medical Science, University of
Tokyo, Tumor Biology; Shirokanedai 4-6-1, Minato-ku, Tokyo 108,
Japan (E-mail:nak@hgc.ims.u-tokyo.ac.jp, Tel:03-5449-5307,
Fax:03-5449-5415)
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LOCUS D31914 496 bp mRNA PL 22-SEP-1997
 DEFINITION *Pneumocystis carinii* MSG mRNA for major surface glycoprotein,
 5'UTR.
 ACCESSION D31914
 NID g2443378
 KEYWORDS MSG.
 SOURCE *Pneumocystis carinii* cDNA to mRNA.
 ORGANISM *Pneumocystis carinii*
 Eukaryotae; Fungi; Ascomycota; Archaeascomycetes;
 Pneumocystidaceae; *Pneumocystis*.
 REFERENCE 1 (sites)
 AUTHORS Wada,M., Sunkin,S.M., Stringer,J.R. and Nakamura,Y.
 TITLE Antigenic variation by positional control of major surface
 glycoprotein gene expression in *Pneumocystis carinii*
 J. Infect. Dis. 171 (6), 1563-1568 (1995)
 MEDLINE 95287050
 REFERENCE 2 (bases 1 to 496)
 AUTHORS Nakamura,Y.
 TITLE Direct Submission
 JOURNAL Submitted (24-JUN-1994) to the DDBJ/EMBL/GenBank databases.
 Yoshikazu Nakamura, Institute of Medical Science, University of
 Tokyo, Tumor Biology; Shirokanedai 4-6-1, Minato-ku, Tokyo 108,
 Japan (E-mail:nak@hgc.ims.u-tokyo.ac.jp, Tel:03-5449-5307,
 Fax:03-5449-5415)
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LOCUS AF035226 1945 bp mRNA PL 02-JAN-1998
 DEFINITION **Pneumocystis carinii** glycoprotein A (gpA) mRNA, partial cds.
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 NID g2739185
 KEYWORDS
 SOURCE *Pneumocystis carinii*.
 ORGANISM *Pneumocystis carinii*
 Eukaryotae; Fungi; Ascomycota; Archiascomycetes; Pneumocystidaceae;
Pneumocystis.
 REFERENCE 1 (bases 1 to 1945)
 AUTHORS Guadiz, G., Haidaris, C.G., Maine, G.N. and Simpson-Haidaris, P.J.
 TITLE Direct Submission
 JOURNAL Submitted (19-NOV-1997) Medicine-Vascular Medicine, University of
 Rochester, 601 Elmwood Avenue, Box 610, Rochester, NY 14642, USA
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LOCUS PCU5392 2470 bp DNA PL 24-DEC-1996
DEFINITION **Pneumocystis carinii** major surface glycoprotein (MSG) gene, partial cds.
ACCESSION U53921
NID g1750217
KEYWORDS
SOURCE *Pneumocystis carinii*.
ORGANISM *Pneumocystis carinii*
Eukaryotae; mitochondrial eukaryotes; Fungi; Ascomycota;
Archaeascomycetes; Pneumocystidaceae; Pneumocystis.
REFERENCE 1 (bases 1 to 2470)
AUTHORS Edman, J.C., Hatton, T.W., Nam, M., Turner, R., Mei, Q., Angus, C.W. and Kovacs, J.A.
TITLE A single expression site with a conserved leader sequence regulates variation of expression of the *Pneumocystis carinii* family of major surface glycoprotein genes
JOURNAL DNA Cell Biol. 15 (11), 989-999 (1996)
MEDLINE 97101113
REFERENCE 2 (bases 1 to 2470)
AUTHORS Kovacs, J.A.
TITLE Direct Submission
JOURNAL Submitted (09-APR-1996) Joseph A. Kovacs, CCMD/CC, NIH, Bldg. 10, RM. 7D43, MSC1662, Bethesda, MD 20892-1662, USA
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LOCUS AF03522. 1945 bp mRNA FLN 02-JAN-1998
 DEFINITION *Pneumocystis carinii* glycoprotein A (gpA) mRNA, partial cds.
 ACCESSION AF035226
 NID g2739185
 KEYWORDS .
 SOURCE *Pneumocystis carinii*.
 ORGANISM *Pneumocystis carinii*
 Eukaryotae; Fungi; Ascomycota; Archiascomycetes; Pneumocystidaceae;
Pneumocystis.
 REFERENCE 1 (bases 1 to 1945)
 AUTHORS Guadiz, G., Haidaris, C.G., Maine, G.N. and Simpson-Haidaris, P.J.
 TITLE Direct Submission
 JOURNAL Submitted (19-NOV-1997) Medicine-Vascular Medicine, University of
 Rochester, 601 Elmwood Avenue, Box 610, Rochester, NY 14642, USA
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BASE COUNT 744 a 279 c 451 g 471 t

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LOCUS PCU53921 2470 bp DNA PLN. 24-DEC-1996
DEFINITION *Pneumocystis carinii* major surface glycoprotein (MSG) gene, partial
cds.
ACCESSION U53921
NID g1750217
KEYWORDS .
SOURCE *Pneumocystis carinii*.
ORGANISM *Pneumocystis carinii*
Eukaryotae; mitochondrial eukaryotes; Fungi; Ascomycota;
Archaeascomycetes; Pneumocystidaceae; *Pneumocystis*.
REFERENCE 1 (bases 1 to 2470)
AUTHORS Edman, J.C., Hatton, T.W., Nam, M., Turner, R., Mei, Q., Angus, C.W. and
Kovacs, J.A.
TITLE A single expression site with a conserved leader sequence regulates
variation of expression of the *Pneumocystis carinii* family of major
surface glycoprotein genes
JOURNAL DNA Cell Biol. 15 (11), 989-999 (1996)
MEDLINE 97101113
REFERENCE 2 (bases 1 to 2470)
AUTHORS Kovacs, J.A.
TITLE Direct Submission
JOURNAL Submitted (09-APR-1996) Joseph A. Kovacs, CCMD/CC, NIH, Bldg. 10,
RM. 7D43, MSC1662, Bethesda, MD 20892-1662, USA
FEATURES
source Location/Qualifiers
1..2470
/organism="Pneumocystis carinii"
/db_xref="taxon:4754"
/lab_host="rat"
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CDS join(<1940..2036,2187..>2470)
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sequence of MSG; surface protein"
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/product="major surface glycoprotein"
/db_xref="PID:g1750218"
/translation="MRIAFFALFAQLSCILVYSIAERDFMSLDEIYEGGDISFDHEKL
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BASE COUNT 707 a 335 c 411 g 1017 t
ORIGIN
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61 tagtattttt ttataataat attttctatt atcaacttga tgttgaaaat atcgtaattt
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2341 aaatcatttg gggagacgcc caggagtcga ctattttagg aaaggtgggg atgtttttac
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2461 ggcacggccg
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LOCUS PCU3966 629 bp mRNA 29-NOV-1995
DEFINITION *Pneumocystis carinii* major surface glycoprotein (msg) mRNA, partial cds.
ACCESSION U39660
NID g1079706
KEYWORDS .
SOURCE *Pneumocystis carinii*.
ORGANISM *Pneumocystis carinii*
Eukaryotae; mitochondrial eukaryotes; Fungi; Ascomycota;
Archaeascomycetes; Pneumocystidaceae; *Pneumocystis*.
REFERENCE 1 (bases 1 to 629)
AUTHORS Kovacs, J.A., Edman, J.C. and Angus, C.W.
TITLE Direct Submission
JOURNAL Submitted (30-OCT-1995) J.A. Kovacs, CCMD, NIH, Building 10, Rm 7D43, MSC 1662, Bethesda, MD 20892-1662, USA

FEATURES Location/Qualifiers
source 1..629
/organism="Pneumocystis carinii"
/db_xref="taxon:4754"
gene 55..629
/gene="msg"
CDS 55..>629
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/translation="MRIAFFALFAQLSCILVYSIAERDFMSLDEIYGGDISFDHEKLE
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TDGYPRGGHLIEDELSEEAAMARPVKQAVQGAQDEIDEKHLAFIVKDKYKEEQKCK
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in reverse transcription"
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BASE COUNT 218 a 73 c 154 g 184 t
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LOCUS AF043102 4002 bp mRNA PLN 06-JUN-1998
DEFINITION *Pneumocystis carinii* surface glycoprotein A (gpA) mRNA, complete cds.
ACCESSION AF043102
NID g3184385
KEYWORDS .
SOURCE *Pneumocystis carinii*.
ORGANISM *Pneumocystis carinii*
Eukaryota; Fungi; Ascomycota; Archiascomycetes; Pneumocystidaceae; *Pneumocystis*.
REFERENCE 1 (bases 1 to 4002)
AUTHORS Haidaris, C.G., Medzihradsky, O.F., Gigliotti, F. and Simpson-Haidaris, P.J.
TITLE Molecular characterization of mouse *Pneumocystis carinii* surface glycoprotein A
JOURNAL DNA Res. 5, 77-85 (1998)
REFERENCE 2 (bases 1 to 4002)
AUTHORS Haidaris, C.G., Medzihradsky, O.F., Gigliotti, F. and Simpson-Haidaris, P.J.
TITLE Direct Submission
JOURNAL Submitted (14-JAN-1998) Microbiol/Immunol, U. Rochester Med. Ctr., Box 672, 601 Elmwood Ave., Rochester, NY 14642, USA
FEATURES
source Location/Qualifiers
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/organism="Pneumocystis carinii"
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/lab_host="C.B-17 SCID mouse"
gene 1..4002
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CDS 52..3849
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1 caaaaatata tttttcttga tatccgtctc ttttctcaa tttgtgcaat tatgaggatt
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121 gatttgccaa atgaggaaga tgtttatggt tatgaaaatt ttgggttgga tcccaattca
181 ccggaaccga gtgaattttt aaatattata gaaatgcttc gaaatgcaa gcgattagga
241 agtgggaaga ttaaccaggg tcaatttctc tcgaatcgta aggctaggag agattttgat

LOCUS D31920 81 bp mRNA PM 22-SEP-1997
DEFINITION *Pneumocystis carinii* MSG mRNA for major surface glycoprotein,
5'UTR.
ACCESSION D31920
NID g2443384
KEYWORDS MSG.
SOURCE *Pneumocystis carinii* cDNA to mRNA.
ORGANISM *Pneumocystis carinii*
Eukaryotae; Fungi; Ascomycota; Archaeascomycetes;
Pneumocystidaceae; *Pneumocystis*.
REFERENCE 1 (sites)
AUTHORS Wada,M., Sunkin,S.M., Stringer,J.R. and Nakamura,Y.
TITLE Antigenic variation by positional control of major surface
glycoprotein gene expression in *Pneumocystis carinii*
J. Infect. Dis. 171 (6), 1563-1568 (1995)
JOURNAL
MEDLINE 95287050
REFERENCE 2 (bases 1 to 81)
AUTHORS Nakamura,Y.
TITLE Direct Submission
JOURNAL Submitted (24-JUN-1994) to the DDBJ/EMBL/GenBank databases.
Yoshikazu Nakamura, Institute of Medical Science, University of
Tokyo, Tumor Biology; Shirokanedai 4-6-1, Minato-ku, Tokyo 108,
Japan (E-mail:nak@hgc.ims.u-tokyo.ac.jp, Tel:03-5449-5307,
Fax:03-5449-5415)
FEATURES Location/Qualifiers
source 1..81
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gene 1..81
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5'UTR 1..81
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/note="major surface glycoprotein"
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61 ttatgctata tattgggatac c
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LOCUS D31914 496 bp mRNA 22-SEP-1997
 DEFINITION *Pneumocystis carinii* MSG mRNA for major surface glycoprotein,
 5'UTR.
 ACCESSION D31914
 NID g2443378
 KEYWORDS MSG.
 SOURCE *Pneumocystis carinii* cDNA to mRNA.
 ORGANISM *Pneumocystis carinii*
 Eukaryotae; Fungi; Ascomycota; Archaeascomycetes;
 Pneumocystidaceae; *Pneumocystis*.
 REFERENCE 1 (sites)
 AUTHORS Wada,M., Sunkin,S.M., Stringer,J.R. and Nakamura,Y.
 TITLE Antigenic variation by positional control of major surface
 glycoprotein gene expression in *Pneumocystis carinii*
 J. Infect. Dis. 171 (6), 1563-1568 (1995)
 MEDLINE 95287050
 REFERENCE 2 (bases 1 to 496)
 AUTHORS Nakamura,Y.
 TITLE Direct Submission
 JOURNAL Submitted (24-JUN-1994) to the DDBJ/EMBL/GenBank databases.
 Yoshikazu Nakamura, Institute of Medical Science, University of
 Tokyo, Tumor Biology; Shirokanedai 4-6-1, Minato-ku, Tokyo 108,
 Japan (E-mail:nak@hgc.ims.u-tokyo.ac.jp, Tel:03-5449-5307,
 Fax:03-5449-5415)
 FEATURES Location/Qualifiers
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 gene 1..496
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 /gene="MSG"
 /note="major surface glycoprotein"
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